

TRANSITION ON THE DEGREE SEQUENCE OF A MIXED RANDOM GRAPH PROCESS

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Abstract: This paper focuses on a mixed random graph process which continuously combines the *classical* model and the BA model. A phase transition on the degree distributions of the mixed model is revealed: while the *pure* classical model possesses a *exponential* degree sequence, the *pure* BA model and the mixed model possess *power law* degree sequences. Note that the intermediate mixed model can be looked as a BA model with *sublinear preferential attachment*. All involved degree distributions are presented explicitly by using a comparing argument developed in this paper.